

FIG. 1A

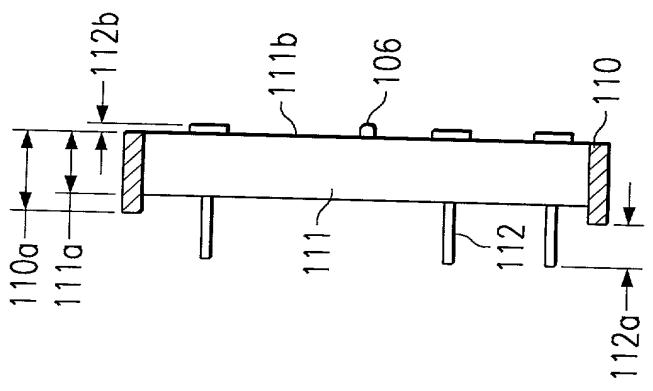


FIG. 1C

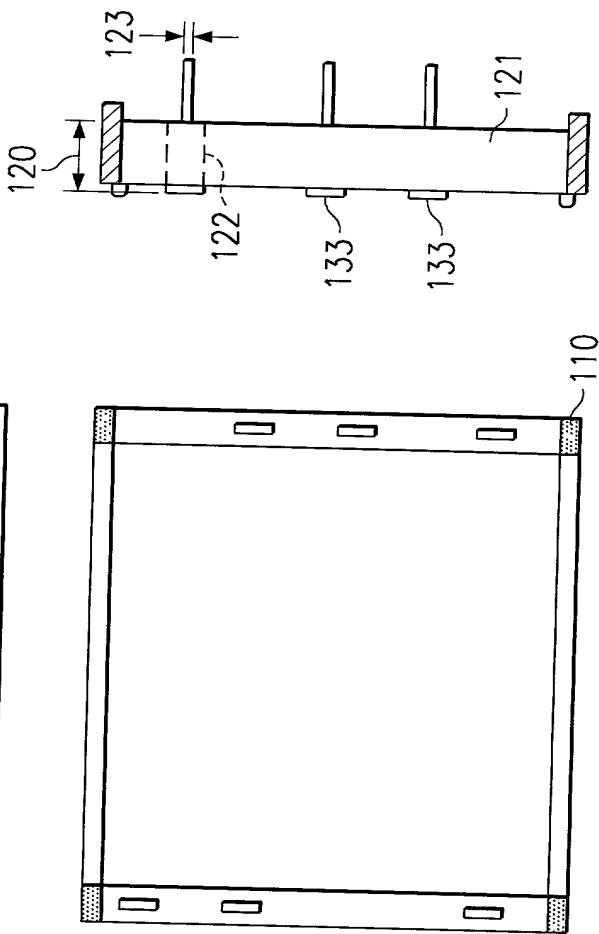


FIG. 1B

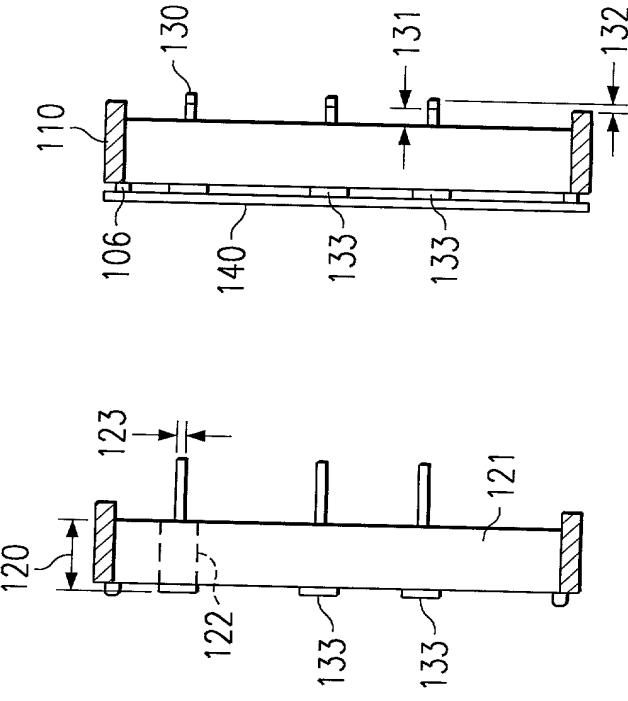


FIG. 1D

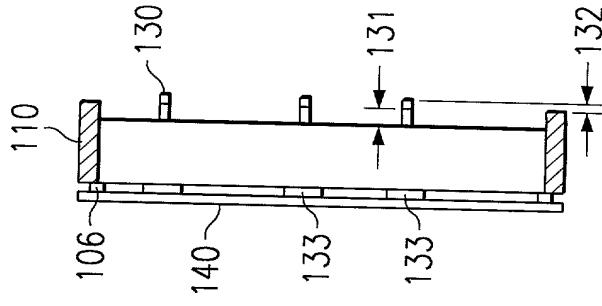


FIG. 1E

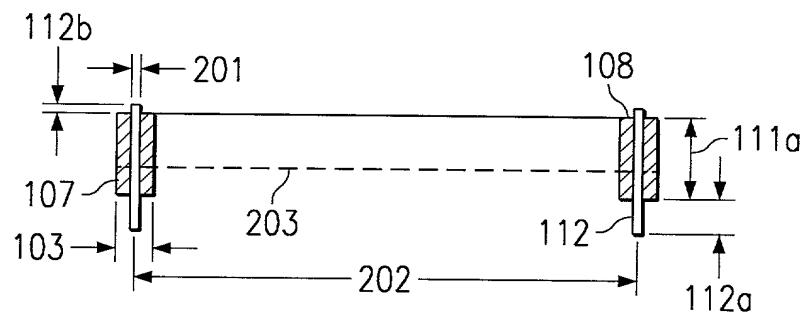


FIG. 2A

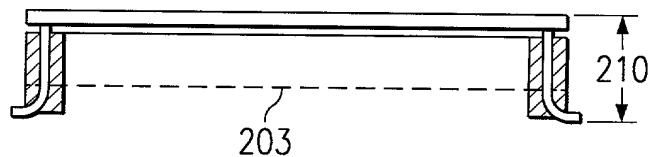


FIG. 2B

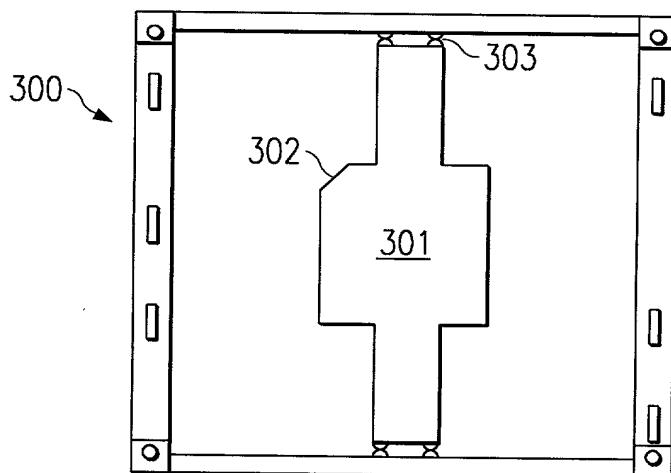


FIG. 3A

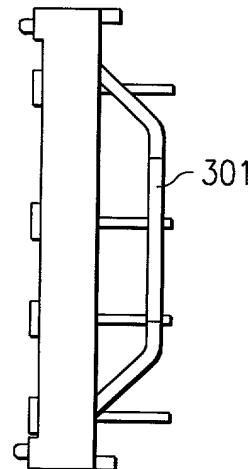


FIG. 3B

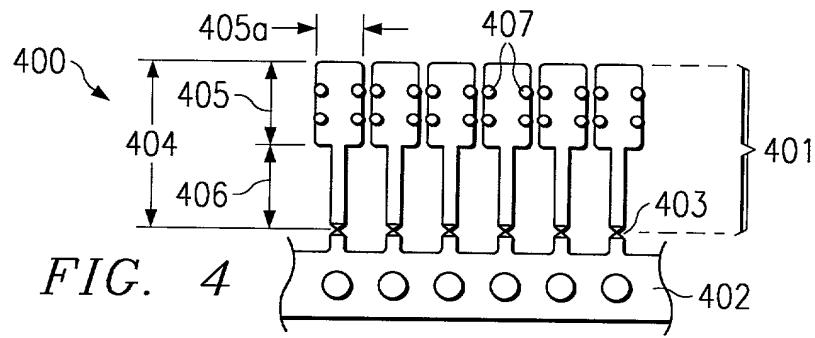


FIG. 4

Stanyl®

Property data

Nylon 46

Flame Retardant, Heat Stabilized

PROPERTY DATA

Mechanical Properties*

	Unit	ASTM Test	TE351	TE250F3	TE250F6	TE250F9
Glass Fiber Content	wt %		0	15	30	45
Specific Gravity	g/cc	D792	1.35	1.47	1.68	1.82
Melting Point	°F	D3417	563	563	563	563
Mold Shrinkage (flow/transverse)	in/in	D955	.018-.020	.006-.009	.004-.006	.003-.005
Water Absorption (at equilibrium 73°F/50%RH)	%		2.4	2.1	1.6	1.3
Izod Impact (notched)						
dry	ft-lbs/in	D256	1.1	0.5	1.3	1.9
conditioned	ft-lbs/in	D256	2.5	0.8	1.9	2.2
Tensile Strength	psi	D638	8,300	16,500	23,000	29,000
dry	psi	D638	5,500	10,000	11,500	21,800
conditioned	%	D638	15	8	3.0	2.1
Tensile Elongation	%	D638	30	20	7.0	3
dry						
conditioned						
Tensile Modulus	Kpsi	D638	390	1,000	1,500	2,500
dry	Kpsi	D638	250	550	820	1,700
conditioned	psi	D790	14,000	27,000	34,000	43,500
Flexural Strength	psi	D790	6,000	17,500	23,000	36,300
dry	Kpsi	D790	380	1,125	1,300	2,200
conditioned	Kpsi	D790	130	550	840	1,600
Flexural Modulus	Kpsi	D2990	250	750	1,380	2,030
dry	Kpsi	D2990	69	350	680	1,200
conditioned	°F	D648	320	480	543	>554
Creep Modulus						
20 MPa/1,000 hrs, 73°F						
20 MPa/1,000 hrs, 250°F						
HDT (@ 264 psi)	°F	D2990	262	302	300	338
Continuous Use Temperature (5000 hours)	°F	D2990	252	293	303	311
(10,000 hours)						
Coefficient of Linear Thermal Expansion (Axial/Transverse)	°F	D696	10/11	4/6	3/8.5	3/8
Flammability 1/32"	10°F	UL 94	V0	V0	V0	V0
Insulation System Rating	/	UL-1446	--	--	H (356 °F)	-

* All mechanical tests conducted at 73°F unless otherwise noted. Conditioned = moisturized to equilibrium at 50% RH, 73°F
June 12, 1995

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EX ST-03

APPENDIX FIG. 1

DSM 

Processing Parameters

Nylon 46

Heat Stabilized

Flame Retardant

Stanyl® TE351, TE250F3, TE250F6, & TE250F9

Drying of Material	Maintain moisture at 0.05% or less. Preheated (185°F) dessicant hopper dryer recommended.			
Mold Temperature*	180 - 300°F			
Recommendations for Molding and Tool	<ul style="list-style-type: none">Well vented mold constructed of hardened tool steelAs with all crystalline materials, reverse tapered nozzles are suggested.			
	Shot size <50% shot capacity		Shot size >50% shot capacity	
Cylinder Temperatures	Rear Center Front Nozzle	540 - 560°F 560 - 590°F 570 - 590°F 580°F	Rear Center Front Nozzle	580 - 600°F 580 - 600°F 580 - 600°F 590°F
	Melt	580 - 595°F	Melt	580 - 595°F
Screw Speed Injection Speed Back Pressure	60 - 100 RPM Medium - Fast 0 - 50 psi		60 - 100 RPM Medium - Fast 0 - 50 psi	

February 8, 1996

NOTE: The data in these tables are to be used only as a guide and should not be considered absolute. Since molding machines differ in design and many screw designs are commonly in use, the processor may find that the best temperature profile is different than what is shown above. It is suggested that you start at the lower end of the listed temperature range and increase as necessary.

*Mechanical, thermal and wear properties will improve slightly with higher mold temperatures. Optimum mold temperature is 250°F.

Cycle time can generally be decreased 20 to 30% by reducing cooling time by half (compared to nylon 66).



APPENDIX FIG.2